

BEST AVAILABLE COPY

Examiner's Exhibit A

Twelve pages including this page



Newton's Telecom Dictionary

by
**Harry
Newton**

The Official Dictionary of
Computer Telephony, Telecommunications,
Networking, Data Communications,
Voice Processing and the Internet

#1 SELLER OVER 100,000 SOLD

TELECOM DICTIONARY



The Official Dictionary of Computer Telephony,
Telecommunications, Networking, Data
Communications, Voice Processing and the Internet

EIGHTH UPDATED AND EXPANDED EDITION

I wrote this book for all of us who are trying to keep up.

It's not a technical book. I explain technical concepts in non-technical terms. I figure anyone ought to be able to understand my definitions.

Some of my definitions are several pages long. They're mini-essays. They explain the term, its benefits and occasionally a checklist on buying and using the item. Sometimes I include warnings. I want my dictionary to make you an informed buyer or an informed seller. I hope you find the dictionary useful.

HARRY NEWTON

Harry Newton has 25 years in telecommunications. He writes constantly. He is probably the telecom industry's most prolific writer. He is publisher of four monthly magazines - Computer Telephony, Teleconnect, Call Center and Imaging. He also founded LAN Magazine and Telecom Gear. He is promoter of the annual trade conference and exposition, Computer Telephony Conference and Exposition. He holds an MBA from the Harvard Business School and an Economics undergraduate degree from the University of Sydney, Australia. He is not an engineer, but wishes he were. He is the telecom's most popular speaker. He has spoken before every telecommunications convention and trade show. He appears as an industry expert on national TV.



ISBN 0-936648-60-0

Flatiron Publishing, 12 West 21 Street, New York, NY 10010
212-691-8215 fax 212-691-1191 Mci Mail 101-5032

ISBN 0-936648-60-0

Newton's Telecom Dictionary

BEST AVAILABLE COPY

A Flatiron Publishing, Inc. Book
Published by Flatiron Publishing, Inc.
Copyright © 1994 by Harry Newton

All rights reserved under International and Pan-American Copyright conventions, including the right to reproduce this book or portions thereof in any form whatsoever. Published in the United States by Flatiron Publishing, Inc., New York.

ISBN 0-936648-60-0

Manufactured in the United States of America

Eighth Edition, November 1994
Cover Designed by Saul Roldan
Printed at Bookcrafters, Chelsea, MI.

NEWTON'S

THE "LOGIC"

I wrote this book for all of

Telecommunications is now

1. The world's largest
2. The world's fastest change you can name — technology

In one decade, this industry has become a controlled, highly-regulated, monopolized free-for-all.

No one has ever written a book in months. No one. Except me. This is the seventh edition. I can't keep telling me, "Daddy, get a life!"

Intel called up and bought Express. \$480 in Fedex charge for dictionaries by Fedex? That's the way it's now in.

Most technical dictionaries do. As a result they leave you more confused. My definitions tell you what its benefits are, what its negative aspects of things, and occasionally some

This is a dictionary to work with the definitions in proposals to cut through the clutter. Users of it. Management uses it to use it in court. (Often they call me a juror. But it's probably as boring as a juror.

You can give my dictionary to your kid. You can even give it to your kid to understand why you, too, have it. I don't claim my dictionary is the best. I add, I re-work and I update. That's an invitation. Send me your in-house glossaries.

The best way to get me is through Mail account 101-5032 or Compu

NEWTON'S TELECOM DICTIONARY:

CALLPATH SERVICES ARCHITECTURE

CALLPATH SERVICES ARCHITECTURE CSA is IBM's architecture for defining the protocols for communication between computers and telephone switches. CallPath Services Architecture, announced in 1991, provides an Application Programming Interface (API) that enables a call management application to interact with telephone systems, with little regard to the protocols or communications interface provided by the telephone system. The idea is that with CallPath a call will arrive at a computer terminal simultaneously with the database record of the caller. And such call and database record can be transferred simultaneously to an expert, a supervisor, etc. CallPath has especial value in telephone call centers. As of writing, IBM provided connectivity to PBXs (AT&T Definity, Generic 3, Northern Telecom Meridian 1, ROLM 9751, Siemens Hicom, NEC) central office switches (AT&T 5ESS and Northern Telecom DMS-100) and has agreements with other PBX manufacturers that provide CallPath connectivity. Aspect, Ericsson, SDX, Telenorma, and Cortelco. IBM's CallPath products provide support for locally attached applications and client/server applications. IBM has CallPath APIs available for mainframes, minicomputers and workstations. In particular IBM System 390 and ES9000, AS/400, RISC System/6000, OS/2 workstations, Windows workstations, Sun Solaris, HP UX, and SCO UNIX workstations. See OPEN APPLICATION INTERFACE and DIRECTTALK.

CAM 1. Call Applications Manager. The name of the Tandem software interface which provides the link between a call center switch telephone switch (either PBX or an ACD) and all Tandem NonStop (fault tolerant) computers. CAM supports most major PBXs and automatic call distributors. 2. Computer-Aided Manufacture. The actual production of goods implemented and controlled by computers and robots. Often used in conjunction with CAD. Only a few factories are completely automated. Usually, there is some human intervention in the actual construction of the product, often to make sure a part is placed in the robot correctly. 3. Controlled Attachment Module. Intelligent Token-Ring hub.

CAMA Centralized Automatic Message Accounting. See **CAMA/LAMA**.

CAMA/LAMA Centralized Automatic Message Accounting/Local Automatic Message Accounting. Specific versions of AMA in which the ticketing of toll calls is done automatically at a central location for several COs (CAMA) or only at a local office for that office's subscribers.

CAMCORDER A camera and a video recording system packaged as a whole.

CAMEO Macintosh-based personal videoconferencing system, announced by Compression Labs in January of 1992. Developed jointly with AT&T and designed to work over ISDN lines and, most recently, Ethernet LANs. The Cameo transmits 15 fps of video and needs an external handset for audio.

CAMP-ON You want to transfer a call to a phone but it's busy. This telephone system feature will allow you to lock the call you're trying to transfer onto the line that's busy. When it becomes free, the phone will ring and the "camped-on" call will be connected automatically.

CAMPUS BACKBONE Wiring between buildings.

CAMPUS ENVIRONMENT An environment in which users — voice, video and data — are spread out over a broad geographic area, as in a university, hospital,

NEWTON'S TELEC

medical center, prison. There may be several LANs on a campus. They will be communicating over telephone, microwave

CAMPUS SUBSYSTEM The part of a recs buildings together. The cable, interbu connectors that enable communication am

CANCEL By touching the "cancel" button on the phone system to ignore the last command, e.g. transfer, hold, park, etc. The "cancel" button is the "release" button. The "release" button is a computer system, i.e. it tells the system to do, no matter how stupid your command. You use when you make a mistake and do it now.

CANNIBALIZE To devour a phone system and another system. A common technique for a manufacturer no longer supplies parts. See the monthly publication Telecom Gear. The telecom equipment. Good stuff, too.

CAP 1. Customer Administration Panel.
2. Customer Administration Center. The Professional Publishing. The compute (opposed to desktop operations), included on the workstation screen. 3. Cellular, Provider, another term for a long distance

CAPS Competitive Access Providers.

CAP'N CRUNCH see CAPTAIN CRUISE

CAPACITANCE The capacity of a medium to store electrical charge. Capacitance is measured in farads.

CAPACITIVE COUPLING The transfer of energy between two circuits by the virtue of the mutual capacitance between them. It is often an unwanted or inadvertent. Capacitive coupling favors high frequencies, whereas inductive coupling favors low frequencies.

CAPACITY 1. The information carrying capacity of a cable determines the maximum number of calls it can switch simultaneously. What the "facility" is determines the maximum number of calls it can keep in conversation simultaneously. 2. The maximum number of calls it can keep in conversation simultaneously is determined by the cable's capacity in bandwidth. 3. The maximum number of calls it can keep in conversation simultaneously is determined by the cable's capacity in bandwidth.

CAPACITY TRANSFER CONTROL which permits single allocation of capacity to a switched broadcast connection. For example, a leader can transfer transmission capacity to a follower. 95% of such transfers will take place within the same region.

US-PAT-NO: 4224596

DOCUMENT-IDENTIFIER: US 4224596 A

TITLE: Object locator system employing variable
frequency code
tone generators

----- KWIC -----

Detailed Description Text - DETX (38):

When the automatic dialer 164 is activated, it dials the system
computer
station at the central decoding office. If the line is busy, the
automatic

dialer continues to re-dial until the line to the computer is free.
It is

assumed that a circuit such as that illustrated in FIG. 4 receives
the signal
transmitted on the WATS line by the circuit of FIG. 5.

Current US Cross Reference Classification - CCXR

(4):

379/177

Current US Cross Reference Classification - CCXR

(5):

379/93.08

[54] **OBJECT LOCATOR SYSTEM EMPLOYING VARIABLE FREQUENCY CODE TONE GENERATORS**

[76] Inventor: Elwyn R. Knickel, 2647 Woodley Rd. NW., Washington, D.C. 20008

[21] Appl. No.: 560,811

[22] Filed: Mar. 21, 1975

[51] Int. Cl.² G08G 1/12; H04M 11/00; G01P 3/48

[52] U.S. Cl. 340/24; 179/2 DP; 324/167; 340/32; 364/460

[58] Field of Search 340/24, 32, 23, 62, 340/263, 52 R, 53, 171 PF, 350, 351; 179/2 DP; 343/112 PT; 325/6, 47, 55; 235/150.26, 150.27, 30 R; 324/167; 364/444, 449, 460

[56] **References Cited**

U.S. PATENT DOCUMENTS

2,529,667	11/1950	Villem	325/51
3,376,509	4/1968	Willcox et al.	325/57
3,419,865	12/1968	Chisholm	340/24
3,568,161	3/1971	Knickel	340/24
3,582,895	6/1971	Abramson	340/171 PF
3,715,572	2/1973	Bennett	340/52
3,719,890	3/1973	Borcianni et al.	179/2 DP
3,783,384	1/1974	Wycoff	325/55
3,789,198	1/1974	Henson	340/24
3,866,124	2/1975	Wycoff	325/55

3,984,807 10/1976 Haemming 340/23

Primary Examiner—John W. Caldwell, Sr.

Assistant Examiner—James J. Groody

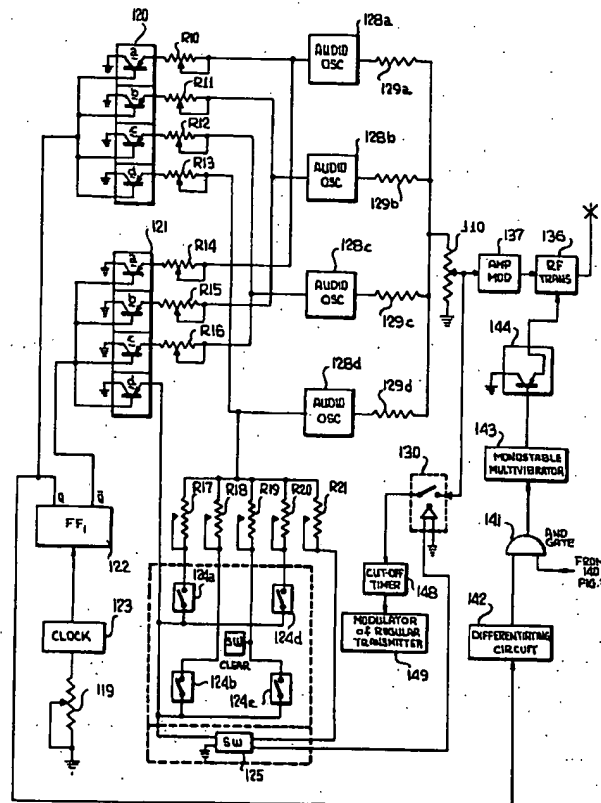
Attorney, Agent, or Firm—Ira C. Edell

[57]

ABSTRACT

Improvements are provided for a vehicle locator system of the type in which vehicle-borne emitters radiate coded tone combinations for reception by spaced sensors which are linked to a central decoding office. In one improvement the vehicle capacity of the system is increased without increasing the number of tone oscillators by using a sequential tone coding arrangement wherein each oscillator is switchable to provide a different tone during different intervals in the coding sequence. In addition, the pulsing rate of the emitted tone is synchronized to the vehicle odometer to assure that a code sequence is transmitted while the vehicle is in the proximity of each sensor station. Additional modifications include party line sharing of telephone lines connecting the sensors to the decoder, the use of long-distance telephone connections to provide coverage for large geographic regions, the use of radio call boxes to link the sensors to a decoding station, and delaying emitter pulsing when two vehicles are in close proximity to reduce the possibility of simultaneous reception of two vehicle codes at a sensor station.

22 Claims, 13 Drawing Figures



US-PAT-NO: 4052570
DOCUMENT-IDENTIFIER: US 4052570 A
TITLE: Telephone system

----- KWIC -----

Abstract Text - ABTX (1):

A telephone set which will automatically redial a telephone number after a busy signal has been received and continues redialing that number until the party being called answers, or until a predetermined number of attempts have been made. As the user dials a telephone number onto the telephone line, whether by manual dialing or by utilizing pulse-type dialing or "touch-tone" type, the number is simultaneously stored in a storing device. A signal detector detects the receiving of a busy signal in response to the dialing of the telephone number. A control circuit, responsive to both the detection of a busy signal and the releasing of the telephone line, waits a predetermined fixed amount of time subsequent to which it seizes the line and causes the number stored to be redialed onto the telephone line. If a busy signal again occurs, a line disconnect circuit responds by releasing the line. The routine is repeated for a predetermined number of times or until a normal ringing signal is obtained, and thereafter the control circuit and the storing means are reset.

Brief Summary Text - BSTX (6):

Another object of the present invention is to provide a telephone set having an automatic dialer, either as a part thereof or as an attachment thereto, which continuously redials a number after receiving a busy signal.

Brief Summary Text - BSTX (7):

Still a further object of the present invention is to provide a

telephone set which is responsive to receiving a busy signal, and which automatically redials the same number at regular intervals until the party being called is reached.

Brief Summary Text - BSTX (8):

A further object of the present invention is to provide a telephone set which will automatically redial a number after receiving a busy signal, and when a regular ringing signal is finally reached will signal the user by means of a visual or audible signal.

Brief Summary Text - BSTX (10):

Yet a further object of the present invention is to provide a telephone set which automatically redials a number after receiving a busy signal, and upon reaching the party being called and the user himself is no longer available to answer, will sound a prerecorded message to the party being called.

Detailed Description Text - DETX (2):

The present invention provides an automatic redialing circuit which automatically redials a number after receiving a busy signal. The redialing circuitry can be directly incorporated within the telephone set housing or can be provided as an attachment unit which is coupled to a standard telephone set. Referring now to FIG. 1, there is shown a standard telephone set 10 which includes a standard telephone set housing and contains standard telephone circuitry which can dial and receive telephone numbers onto a telephone line. An attachment unit 12 is placed near the telephone set and is electrically coupled thereto by means of the line 14. The attachment unit contains a clear button 16 and a hold button 18 whose use will hereinafter be explained.

Detailed Description Text - DETX (16):

The above sequence of redialing, waiting, detecting a busy, and then

releasing the line, will continue repetitively. However, should the automatic redialing produce a normal ringing signal instead of a busy signal, the output from the frequency detector 54 will now be a low, while the output from the frequency detector 56 will be a high which will be inverted to produce a low at the output of AND 60. This low will be sent along line 122, and inverted by the inverter 132, to produce a high input to gate 118. The output on line 124 will also be a high since the line has been seized, and when the number has been completely dialed, the output from the pulse detector 126 will also be a high. As a result, after the automatic dialing of a stored number from the number register onto the telephone line, and if the response is a normal ringing, AND gate 118 will produce a high putput which will trigger the buzzer 134 causing an audible sound to be heard, calling attention to the user that the number he desires has finally been reached. Instead of the audible buzzer a visual indicator can be provided. The user will then be able to pick up his handset and wait until the party being called answers the other end of the line, thereby completing the call.

Current US Original Classification - CCOR (1):
379/355.09

[54] TELEPHONE SYSTEM

[76] Inventor: Paul J. Sutton, 300 Central Park
West, New York, N.Y. 10024

[21] Appl. No.: 643,322

[22] Filed: Dec. 22, 1975

[51] Int. Cl.² H04M 1/50

[52] U.S. Cl. 179/90 B

[58] Field of Search 179/90 B, 90 BB, 90 BD,
179/90 CS, 90 AD, 5 R, 90 K

[56] References Cited

U.S. PATENT DOCUMENTS

3,760,121	9/1973	Nissim	179/90 K
3,792,203	2/1974	Martin	179/90 B
3,868,479	2/1975	Schweitzer	179/90 B
3,885,108	5/1975	Zock	179/90 B
3,899,645	8/1975	Brafman	179/5 R
3,920,926	11/1975	Lenaerts et al.	179/90 B

Primary Examiner—Thomas A. Robinson

Assistant Examiner—Gerald L. Brigrance

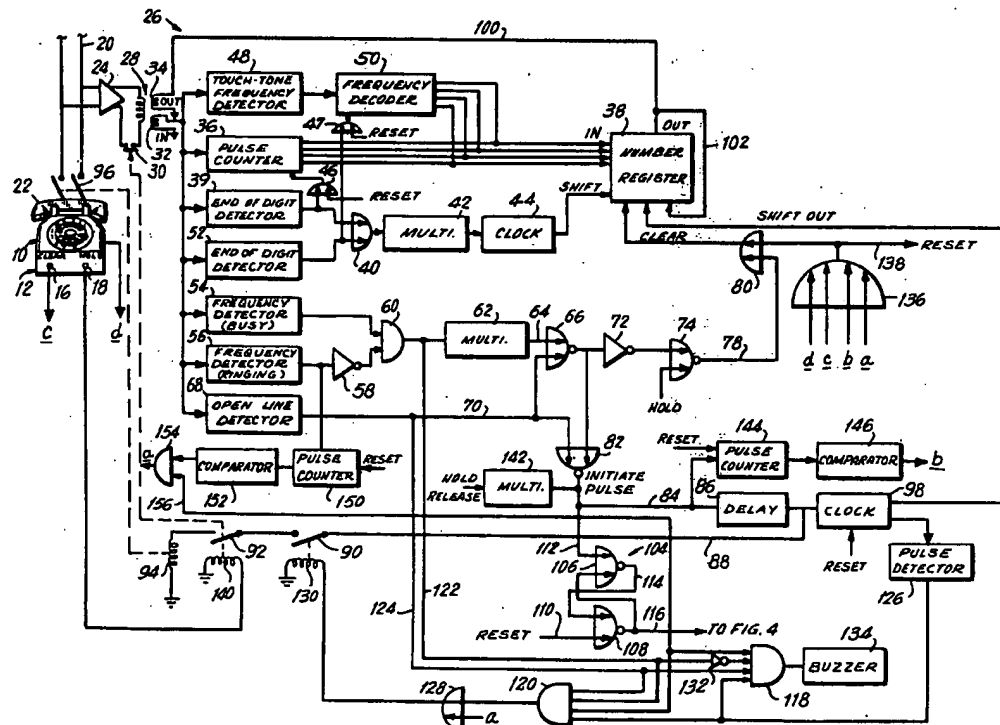
Attorney, Agent, or Firm—Paul J. Sutton

[57]

ABSTRACT

A telephone set which will automatically redial a telephone number after a busy signal has been received and continues redialing that number until the party being called answers, or until a predetermined number of attempts have been made. As the user dials a telephone number onto the telephone line, whether by manual dialing or by utilizing pulse-type dialing of "touch-tone" type, the number is simultaneously stored in a storing device. A signal detector detects the receiving of a busy signal in response to the dialing of the telephone number. A control circuit, responsive to both the detection of a busy signal and the releasing of the telephone line, waits a predetermined fixed amount of time subsequent to which it seizes the line and causes the number stored to be redialed onto the telephone line. If a busy signal again occurs, a line disconnect circuit responds by releasing the line. The routine is repeated for a predetermined number of times or until a normal ringing signal is obtained, and thereafter the control circuit and the storing means are reset.

22 Claims, 4 Drawing Figures



- 201.12 . Provisioning
- 202.01 . Conferencing
- 203.01 .. Operator control
- 204.01 .. Subscriber control
- 205.01 ... Conferencing initiation by single calling station
- 206.01 .. At substation
- 207.01 . Three-way calling
- 207.02 . Service trigger (activation or deactivation)
- 207.03 .. Time (e.g., time of day, expiration of time period, time zone, date)
- 207.04 .. Line or loop condition
- 207.05 ... Busy signal (e.g., off hook)
- 207.06 ... Transition from off-hook to on-hook (e.g., busy to idle, hook flash)
- 207.07 ... Transition from on-hook to off-hook (e.g., idle to busy)
- 207.08 ... No answer (e.g., ringing signal, on-hook, idle)
- 207.09 Number of rings
- 207.1 Expiration of predetermined time period
- 207.11 .. Service access code
- 207.12 .. Party location
- 207.13 .. Party identification or validation (e.g., personal identification number (PIN))
- 207.14 .. Dialed number identification service (DNIS)
- 207.15 .. Automatic number identification or calling number identification (ANI or CLID)
- 207.16 .. Ringing signal (e.g. having a predetermined cadence or distinctive ring)
- 208.01 . Priority override (e.g., butt-in)
- 209.01 . Repetitive call attempts (e.g., camp-on-busy, / ←
 ~~retry~~)
- 210.01 . Reserved call (e.g., return call, call back, scheduled call, reestablished call)
- 210.02 . Call blocking
- 210.03 .. Call from anonymous caller
- 211.01 . Call diversion (e.g., call capture)
- 211.02 .. Call forwarding
- 211.03 ... Sequential ringing
- 211.04 ... Simultaneous ringing
- 211.05 ... Smart card
- 212.01 .. Call transfer
- 213.01 .. Intercept (e.g., dead or changed number)
- 214.01 .. Secretarial or answering service
- 215.01 . Call Waiting
- 216.01 . Abbreviated dialing or direct call (e.g., hot line)
- 217.01 . Audible paging
- 218.01 . Automatic directory service (e.g., on-line)
- 218.02 . Performed by operator (e.g., butt-in, busy verification)
- 219 **PLURAL EXCHANGE NETWORK OR INTERCONNECTION**

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☒ BLACK BORDERS
- ☒ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☒ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.